UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
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SUBJECT: Standard Chlorine: Preliminary BTAG Comments on FS

DATE: 3-11-93

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The Feasibility Study has been reviewed and the comments below provided so that deadlines can be met, minimizing delays. The document invokes some inferences from the RI that are based upon data gaps and makes the error of basing conclusions on these data gaps. Several of the alternatives are then developed based upon these data gaps and assumptions, resulting in the potential long term damage to the ecosystem and local habitats. In addition, several (if not all) of the alternatives will cause various degrees of ecological and habitat impacts which have not been addressed in the alternatives discussions. Lastly, the data gaps evident in the RI and reflected in this document should e filled during the design phase and some suggestions in this direction are included.

DATA GAPS:

Several parts of the FS rely upon data that is presumed to be in the RI. For example. On page 1-24 the statement is made that "(the) RI data indicates (SIC) ... minimal impact to surface water quality..." Insofar as this is an unfounded opinion it has no place in the document. Further, the RI fails to make such a statement and if it did BTAG would have raised the issue at the time of review. At best, the RI merely attempted to lead the reader to this conclusion, but did not do so with sound scientific evidence. In fact, surface water, sediment, and fish tissue data show the opposite.

In addition, contamination of ground water should not be dismissed on the basis of protection of human health through the supply of alternative potable health to human receptors. Ground water contamination (i.e., the Columbia aquifer) still carries a serious potential for ecological impacts.

No data is contained in the R to support the statement on ES-3 to the effect that "... catch basin No. 1 soil ... is not being contacted by any receptors." It is very likely that ecological receptors are exposed and the severity is still open to question. From the ecological risk viewpoint, and without substantial

information, the worst case should be assumed.

On the same page, the document states that "(s)ediment ... data indicates (SIC) that this silt fence has limited migration ..." This statement is also difficult if not impossible to substantiate on the basis of contents in the R. At best the data re inconsistent, as levels in the sediment and soil profile can be interpreted to demonstrate a completely different picture.

ALTERNATIVES:

The discussion of alternatives is limited to engineering issues and only incompletely discusses the ecological ramifications in terms of impacts and mitigation. For example, in page ES-4 migration of contaminants is postulated to be reduced through emplacement of a new cap, but the document (in sections 4 and 5) fails to mention that some caps are not designed to guard against invasive soil organisms, e.g., earthworms.

Many earthen caps are merely compacted soils which, over time, can be permeated by water following earthworm holes, resulting in rewetting of the contaminants and transport via ground water pathways. In addition, neither this document nor the R acknowledges for soil organisms under such conditions to represent a pathway to contamination of the food chain.

Alternatives 1 and 2 are not protective of ecological resources at all and should be discarded. While it is understood that the 'no action' alternative is necessary by regulation, No.2 is merely gratuitous and could never be given serious consideration as it is not an improvement at all. The investigator should not be allowed to included it in a serious document.

Alternative 3 proposes to leave some soils in place that are above the response levels. While these would be capped, we prefer removal and treatment of all soils and sediment above the 33mg/kg action level. Discussion of any alternatives should include an acknowledgement that all of some alternatives and portions of others are not intended to be protective of ecological resources. On the contrary, some alternatives are actually destructive of ecological resources and habitats (e.g., dredging), but no mention is made regarding restoration or mitigation.

Ecological restoration and mitigation are requirements of CERCLA and several sites have already incorporated the principles of ecological restoration. For example, capping has traditionally included grass covers which require constant mowing as part of the annual O & M costs. Restoration techniques are now available the substitute vegetative covers that involve scrub/shrub covers that require mowing only once annually and sometimes even less. In this way, O & M costs are reduced and ecological values are

enhanced.

On page 4-14, the silt fence discussions present a narrow view. First of all, it should considered only an interim measure and not part of any permanent solution. In addition, they (and sediment barriers) are useful only in those areas of low gradient and low levels of contamination. Strong storm events easily render them useless. these devices should be dropped from consideration in any of the alternatives.

On the whole, the effectiveness of alternatives appears to need additional consideration. For example, on page 5-13, continued discharge of seeps is discussed, but none of the alternatives fully discusses this problem. Apparently, it is assumed that the interceptor trench will eliminate these, but many questions regarding its ability to completely intercept the ground flows are outstanding. As a suggestion, the depth of the trench should be reconsidered if that is a crucial matter with regard for curtailment of seeps.

Compliance with ARARs is often incompletely discussed. On page ES-8 and in Section 5, it is not clear that they have fully considered ecological issues (e.g., fish and wildlife) or habitat matters (e.g., 404 mitigation). The issue of ARARs should be re-opened and further evaluated.

MISCELLANEOUS:

In several parts of the document, unspecific terminology is used. On page ES-5, the term 'readily accessible' is used, but it is unclear just exactly what 'readily' means.

On ES-8, the terms 'highest concentration' and 'natural attenuation' are sued without benefit of definition. Both of these imply some mysterious stoichiometric calculation, but none is specified. Both of these represent residual levels of contamination that may pose a potential risk to ecological receptors.

On page 3-12, what kinds of 'possible changes' would be the objective? We suggest that both tissue levels of contamination in fish and red winged black birds be included in long-term monitoring along with chronic toxicity testing, such as lettuce seed root elongation.

On page 1-17, surface water is mentioned as having been contaminated as a likely result of a suspect loss of integrity in the upper basin liner. It may be possible that a continuing source is now in existence and that the design phase should include sampling to verify this source. the elevated levels in the last paragraph on this page has serious implications for the widening extent of contamination. In light of this, any statements

regarding minimal impacts to surface water (see comment above Re: p 1-24) should be withheld.

CONCLUSIONS AND RECOMMENDATIONS:

Since the most sensitive ecological receptor surrogate is lettuce seed germination and since it demonstrates a response at 33 mg/kg, that level should prevail as the target clean-up level. The higher human health number(s) should be disregarded.

Regardless of the type(s) of remedial methods used, all areas where habitat is disturbed, removed, or covered, the plan should include the principles of ecological restoration and mitigation. Plans should be made to restore and replace at least at the ratio of 1:1.